

I CLAIM:

1. In a reader for electro-optically reading indicia, an arrangement for focusing at least one of a light beam directed along an outgoing path toward the indicia for reflection therefrom, and return light reflected along a return path from the indicia over a field of view, the arrangement comprising:

- a) a first prism through which said at least one of the light beam and the return light is transmitted and optically modified over a first optical distance, the first prism having a first cross-section that varies transversely of at least one of the paths;
- b) a second prism through which said at least one of the light beam and the return light is transmitted and optically modified over a second optical distance, the second prism having a second cross-section that varies transversely of said at least one path; and
- c) a drive for moving at least one of the prisms relative to the other of the prisms and changing at least one of the optical distances to focus said at least one of the light beam and the return light at focii spaced along said at least one path.

2. The arrangement of claim 1, wherein each cross-section of the prisms increases in opposite directions as considered perpendicularly to said at least one path.

3. The arrangement of claim 1, wherein each prism is a right triangular prism.
4. The arrangement of claim 1, wherein the first prism has a first planar face extending perpendicularly to said at least one path, and wherein the second prism has a second planar face extending perpendicularly to said at least one path, and wherein the first and second faces are parallel to each other throughout movement of said at least one prism.

5. The arrangement of claim 1, wherein the prisms have planar contact faces in surface area engagement with each other throughout movement of said at least one prism.

6. The arrangement of claim 1, wherein the drive moves said at least one prism in drive directions perpendicular to said at least one path.

7. The arrangement of claim 1, wherein the prisms are right triangular prisms having planar contact faces at each hypotenuse, and wherein the contact faces engage each other in a common plane, and wherein the drive moves said at least one prism in drive directions along said common plane.

8. The arrangement of claim 1, wherein the drive is operative for moving said at least one prism in a continuous manner to form a multitude of focii in a range between a first sum of the first and second optical distances and a second sum of the first and second optical distances.

9. In a method of electro-optically reading indicia, a method of focusing at least one of a light beam directed along an outgoing path toward the indicia for reflection therefrom, and return light reflected along a return path from the indicia over a field of view, the method comprising the steps of:

a) transmitting and optically modifying said at least one of the light beam and the return light over a first optical distance through a first prism having a first cross-section that varies transversely of at least one of the paths;

b) transmitting and optically modifying said at least one of the light beam and the return light over a second optical distance through a second prism having a second cross-section that varies transversely of said at least one path; and

c) moving at least one of the prisms relative to the other of the prisms and changing at least one of the optical distances to focus said at least one of the light beam and the return light at focii spaced along said at least one path.

10. The method of claim 9, and the step of configuring each cross-section of the prisms to increase in opposite directions as considered perpendicularly to said at least one path.

11. The method of claim 9, and the step of configuring each prism to be a right triangular prism.

12. The method of claim 9, and the step of maintaining planar faces on the prisms in mutual parallelism throughout movement of said at least one prism.

13. The method of claim 9, wherein the moving step is performed by moving said at least one prism in drive directions perpendicular to said at least one path.

14. The method of claim 9, and the step of maintaining planar faces on the prisms in surface area engagement throughout movement of said at least one prism.

15. The method of claim 9, and wherein the moving step is performed by continuously moving said at least one prism to form a multitude of focii in a range between a first sum of the first and second optical distances and a second sum of the first and second optical distances.